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ABSTRACT

This monograph addresses issues and problems related to identification of and programming for gifted/talented children of preschool, kindergarten, and primary age. Barriers to early identification and programming are identified. A rationale for early identification and programming is presented, followed by administrative options including mainstreaming, pull-out programs, mentors/tutors, after-school programs, Saturday programs, and summer programs. The process of differentiating a curriculum for young gifted children is described. Elements of conceptual models used for developing an instructional program are then outlined, including a theoretical base, curriculum, instructional methods, child assessment, teacher role, teacher-child interactions, use of time, and use of space. Also addressed are methods of serving the gifted handicapped, serving the gifted from low-income and minority homes, and involving parents. Three model programs developed at the University of Illinois are described: Retrieval and Acceleration of Promising Young Handicapped Talented Children (RAPYHT), Bringing Out Head Start Talents (BOHST), and the University Primary School. The document includes sample instruments such as screening checklists, as well as lesson plans for the classroom and the home in art, music, creativity, reading, math, and psychomotor talent. (JDD)

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Issues in Educating Young Gifted Children
Promising Practices

Leadership Accessing Monograph

Education of Gifted and Talented Youth

Dr. Merle Karnes, College of Education, University of Illinois

Indiana Department of Education
Office of Gifted and Talented Education
H. Dean Evans, Superintendent

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Introduction

In the school year 1985-86, Purdue University, in contract with the Indiana Department of Education, organized the Leadership Accessing Project, a program that provided state-of-the-art information and guidelines concerning the development of programs for gifted and talented youth of Indiana school corporations. Five nationally and internationally recognized specialists in gifted and talented education, Ms. June Cox, Dr. Merle Karnes, Dr. Bruce Shore, Dr. Barbara Clark, and Dr. Abraham Tannenbaum, gave symposium addresses at three sites in Indiana (Indianapolis, Columbus, and South Bend). They addressed key issues and problems in identification, programming, and curriculum development for the gifted.

In addition, the symposiasts submitted the following monographs for publication by the Indiana Department of Education. Each includes thought provoking advice concerning program development for gifted and talented youth.

The symposiasts were selected by a project advisory committee using the following criteria: (1) the nominees were known by the project leaders and/or advisory committee members to have a significant message for gifted and talented education, and (2) the nominees had never or rarely presented their ideas in Indiana.

Introduction to Monograph

Dr. Merle Karnes presents a strong case for the provision of special programs for potentially gifted preschool children. She also argues that the need is especially great if the child is from a low-income home, a minority family, or is handicapped. She describes identification procedures which she has developed to find the potentially handicapped. Teachers must be carefully trained to use the procedures and instruments which she has developed. To overcome the lower reliability of early childhood identification procedures, a larger percentage of children is included (10-20 percent) than is typical of programs for gifted children at the elementary level.

The following goals have been formulated for the educational program at the University (of Illinois) Primary School (UPS):

1. To develop a healthy, realistic self-concept and good self-esteem.
2. To acquire appropriate and effective interpersonal skills.
3. To have positive attitudes toward school and learning.
4. To persist at task.
5. To develop exploratory behavior and ability to take risks.
6. To engage in creative and productive thinking.
7. To develop higher-level thinking processes.

The project has also developed a set of goals for the parents of preschool gifted children who are in the UPS program:

1. To help parents understand their gifted child.
2. To acquire skills for advocating for their gifted child.
3. To acquire the knowledge and skills that will enable them to promote the talents of their child.
4. To learn appropriate and effective methods of child management.
5. To utilize resources that will be beneficial to their gifted child.

The instructional program for the children is based on the following principles:

a. Learning involves acting on the environment.
b. Learning is developmental.
c. Learning accustoms the child to decisions.
d. Learning integrates knowledge.
e. Learning is based on diaglogue.

There is much emphasis on decision making, on the development of independence and self-direction, and on having children work together in planning and carrying out their own special projects.

Evaluation data indicates that this program is highly successful in meeting its goals. Gifted children profit from the early identification and educational intervention, and they profit from the opportunity to work with other gifted children under the direction of teachers, mentors, and tutors who know how to differentiate instruction to meet the needs of gifted children.

Biography of Dr. Merle B. Karnes

Dr. Merle B. Karnes has a long history of interest in the identification and programming for gifted children, especially young gifted children. In the early 60s, when she was director of Special Education in the Champaign Community Unit IV Schools, she provided leadership in conducting research on underachieving gifted children and in developing and evaluating programs for functionally gifted children. Also during that decade, she developed a demonstration program for gifted children K-12, referred to as "Project Creativity," funded by the State of Illinois. In the middle 60s, as a member of the faculty of the University of Illinois and director of a center for young disadvantaged children, she and her associates studied the gifted among children from low socioeconomic backgrounds. In the mid-70s, she received funding from the Federal Bureau of Education of the Handicapped to develop a model program for young gifted/talented handicapped children RAPYHT (Retrieval and Acceleration of Young Handicapped and Talented), the only federally funded program for young gifted handicapped, has been replicated in more than twenty states, and in 1984 the Administration of Children, Youth and Families (ACYF) approved a proposal to adapt RAPYHT for the Head Start population.

Over the years, Dr. Karnes has served on the State of Illinois Advisory Council for the Gifted and has been a speaker and consultant nationwide on the topic of identifying and educating young gifted children, the handicapped, the gifted from middle-, upper-class, and low-income homes who are potentially gifted.

In addition to the numerous instructional packages she has developed for young children. Dr. Karnes has written, edited, or collaborated on more than 130 books, chapters, monographs, reviews, and articles. She has taught in public schools in Missouri, Kentucky, California, and Illinois. Since 1970, she has directed numerous programs and research projects related to preschool education for the gifted, the handicapped, and the bright/gifted handicapped. Currently, she coordinates a training program in gifted education at the University of Illinois and directs University Primary Schools, a program for young gifted/talented children ages three to eight.

Dr. Karnes has served as president of the National Council of Administrators of Special Education, the Illinois Council of Administrators of Special Education, the Illinois Council for Exceptional Children, and the Division for Early Childhood of the Council for Exceptional Children. In 1968, she was cited by the University of Missouri as one of its 100 most outstanding women graduates. In 1973, she received the J. E. Wallace Wallin award, the highest honor bestowed by the Council for Exceptional Children, for outstanding contributions to exceptional children. In 1974, she was selected by the Illinois Council for Exceptional Children as one of seven who have made the greatest contributions to the field of Special Education over the past 25 years. Recent recognitions include the University of Illinois Mothers' Association Medallion of Honor and an award at the Division of Early Childhood national conference for research in establishing the efficacy of early childhood intervention. She is the current editor of the *Journal of the Division for Early Childhood.*

Dr. Karnes is author of more than half the chapters in a book she has edited entitled *The Underserved: Our Young Gifted Children* (1983), published by the Council for Exceptional Children. In the fall of 1986, the American Guidance Service (AGS) will present a program she has developed for in-service training of teachers of gifted children. The package also includes units for the teachers to implement in their classrooms.

Abstract

This monograph addresses issues and problems related to identification and programming for gifted/talented children of preschool, kindergarten, and primary age: insufficient advocacy, financial constraints, lack of trained personnel, and a dearth of models. A rationale for early identification and for working closely with parents is highlighted. The last section describes three model programs developed at the University of Illinois which have been found to be effective and which represent promising, replicable practices. Sample instruments and curriculum for the classroom and the home are included.

Issues in Educating Young Gifted Children
Promising Practices

Attention to the young gifted or talented child, probably the most underseved of all young children, is long overdue. Fifteen years ago, the same was true of young handicapped children. Then, the federal government assumed leadership in seeing that such children were found and served. In 1968, the Children's Early Education Assistance Act was passed to encourage the development of models for the education of young handicapped children that could be made replicable in three years, especially in the state where the model was developed. This legislation, with an initial allocation of one million dollars, was implemented in 1969. Twenty-four demonstration projects were funded, the total allocation growing to some 22 million dollars. The services provided have included over 300 demonstration projects, more than 75 outreach projects, nine research institutes, and two technical assistance projects.

As a result, states are taking greater responsibility for young handicapped children. The Education for All Handicapped Children Act of 1970 (Public Law 94-142) mandates services for all handicapped children three years of age and older, unless such a mandate conflicts with state law, state practice, or court order. 'Child find' is mandated at birth, and the Preschool Incentive Grant (Section G19) of Public Law 94-142 provides incentive funds to stimulate expansion of programs for the young handicapped. Public Law 94-142 makes it clear that these children must be provided with appropriate educational programs and that each handicapped child must have an individual educational plan formulated in cooperation with the child's parents. A number of states have mandatory legislation for young handicapped children three years and older, and a few from age zero. Even states lacking mandatory legislation down to age three usually have permissive legislation. Millions of dollars are spent at the federal, state, and local levels to provide young handicapped children with the best education possible. If such a plan developed by the federal government could be implemented for young gifted children, comparable progress might be made. The federal government has certainly developed a viable and highly successful blueprint for helping states and local agencies develop programs for special populations.

With the exception of young handicapped children, however, the public schools in general are geared to educating normally functioning children from kindergarten through grade 12. Only California and Connecticut have legislation making it possible to provide an educational program for the gifted from age four. Identification and programming for gifted children is generally postponed until the middle elementary grades. There is no office of the gifted at the federal level, nor are there federal funds to assist states and local agencies in initiating programs for young children or for gifted children at any age.

Over the last 20 years, research has established the efficacy of early intervention for young children from low-income homes and for young handicapped children (Consortium for Longitudinal Studies, 1983; Lazar & Darlington, 1979; Schweinhart & Weikart, 1981). In 1981, a special issue of the *Journal of the Division for Early Childhood* was devoted to research reports confirming the efficacy of programming for young handicapped children (Bricker & Sheehan, 1981; Karnes, Shwedel, Lewis, Ratts, & Esry, 1981; Moore, Fredericks, & Baldwin, 1981; Rosen-Morris & Sitkei, 1981; Schweinhart & Weikart, 1981; Simmons & Martin, 1981; Weiss, 1981; Zeitlin, 1981). Many experts in the field of the handicapped have reinforced the principle that the earlier a handicapping condition is identified and intervention provided, the better the chances are that the child's potential will be fully realized (Anastasiow, 1981; DeWeerd, 1981).

If the early years are crucial to the disadvantaged or handicapped child's development, it seems reasonable to consider early identification and programming for gifted children. How early? Reinforcing Hune (1961) and Bloom (1964) on the importance of the first few years in determining intellectual development, White (1975) leads one to conclude that if the child is not adequately stimulated by age three it may be too late.

Unfortunately, legislative and public support for educational services to young children who are handicapped or at risk does not extend reliably to young gifted children. The widespread impression is that "giftedness will out." Many people also apparently believe that differentiating instruction or services for the young gifted child is unfair since the gifted are already blessed with more ability

than others of their chronological age. According to another popular attitude, concern over the young gifted child is premature: there is plenty of time during the elementary grades or even as late as the third or fourth grade. Talk of the gifted among the handicapped, moreover, is often met with a puzzled look, as if a handicapping condition necessarily precludes giftedness. Head Start serves more young children than any other program in the country, or in the world for that matter, but only in recent years has it occurred to anyone that there may be gifted children in the Head Start population.

We are moving at a snail's pace in identifying and programming for young gifted children. In 1979, Jenkins reported that of 113 programs at the primary and preschool levels in the 50 states, only 20 were at the kindergarten level and five below the kindergarten level. In a similar survey, Karnes, Shwedel, and Linnemeyer (1981) sent a questionnaire to each of the state departments. Their results yielded only 18 programs below kindergarten, and follow-up telephone conversations led the researchers to question whether some of the programs were actually comprehensive and ongoing.

This chapter will address the following issues: (1) barriers to early identification and programming, (2) rationale for early identification and programming, (3) administrative alternatives, (4) differentiation of instruction, (5) use of a conceptual model for developing an instructional program, (6) serving gifted handicapped children, (7) serving the gifted from low-income and minority groups, and (8) parent involvement.

The last section highlights the major components of three models for young gifted/talented children developed at the University of Illinois. The first model was developed for gifted/talented handicapped children. The second model is a model adapted for the Head Start population from the gifted/talented handicapped. The third is a model developed for nonhandicapped gifted and talented. The major characteristics of each will be presented and a limited number of samples of products developed in a project will be included.

Barriers to Early Identification and Programming

A major cause of negligence in serving young gifted children is the want of advocates for the gifted at that age. Professionals in gifted education have concentrated on older children, and few leaders in gifted education have the training or experience to work with young children. Therefore, they are not motivated to advocate for this segment of the gifted population. Institutions training teachers to work with gifted children seldom prepare their students to work with the young gifted, because the trainers themselves lack the experience, training, or interest to do so, and even if training with young gifted children were made available, practicum placements would likely be a problem. Institutions that offer training in early childhood, on the other hand, usually do not include training to work with gifted children. Even if there were institutions interested in fully training teachers and supervisors to work with young gifted children, where would graduates find a position? Who would employ them?

Parents have not been vocal advocates for their young gifted children even in the primary grades of the public schools, and when nonhandicapped children are not served by the public schools below age five, the parents cannot press for special classes for their preschool gifted children since it is not legal for the schools to provide them. Legislation including financial support is needed to make it legal for public schools to provide services to gifted children as early as three years of age.

The inadequacy of financial resources may well be the chief reason for failure to identify and program for the young gifted child. It does cost money to serve the gifted adequately. Who is willing to pay the bill? Currently parents of young gifted children are the chief source of funding, especially for the very young, and the few programs that do exist below age five are predominantly in private schools. To enroll a child in a private school presupposes financial resources which almost automatically exclude children from low-income and even lower middle-class homes. As a rule, minority children are underrepresented in these schools.

Unfortunately, the federal government is not providing the leadership to initiate programs nationwide as it did in the case of the young handicapped child. Even when a federal Office of the Gifted existed, the funding was so low that a network such as the one for young handicapped in the Office of Special Education Programs (OSEP) was not possible. Only three projects at the preschool level were funded by the Office of the Gifted — one at the University of Washington in Seattle, one in the Panhandle Child Development Association, Inc., Coeur D'Alene Idaho, and the latest at the University of Illinois, Urbana-Champaign. The University of Illinois Program was terminated in its second year when the Office of the Gifted was abolished.

In addition to insufficient advocacy for young gifted children, scarcity of personnel trained both to program for the gifted and to work with young children, lack of legislation to enable programming for the gifted down to age three, lack of financial support for programs for the young gifted, and lack of federal leadership, barriers to identification and programming also include the lack of efficacy data to establish the worth of early intervention with gifted children, the lack of reliable instruments and procedures for identifying young gifted children, and the scarcity of exemplary models that can be replicated with confidence. Some people feel uncomfortable labeling young children as gifted (perhaps *potentially gifted* is safer), and there is the related fear that if a child is judged gifted while too young for corroboration, the parents may create problems by exerting undue pressure to excel.

The barrier to efficacy data is that only a few foundations are willing to invest in research with gifted children, and what little money is available has been invested in pursuing questions pertaining to older gifted children. We need to convince others including federal and state governments and foundations, to support research on the young gifted child.

Rationale for Early Identification and Programming

One of the most important reasons for early identification and appropriate programming for the young gifted child is the prevention of underachievement and of negative attitudes toward school and learning. We have a body of research findings to draw from that indicate quite clearly that the longer underachievement persists, the more entrenched it becomes and the more difficult it is to remediate (Karnes, Schwedel, & Kemp, 1985). According to Gallagher, "by the time the gifted underachiever has reached the middle elementary grades, his underachievement is a genuine life style, and a major educational readjustment or counseling over an extended period of time are often needed to change it" (1975, p. 363). While the causes of underachievement are difficult to determine, there is sufficient research to indicate that they may include poor teaching (Whitmore, 1980), as well as factors in the home (Bricklin & Bricklin, 1967; Karnes, McCoy, Zehrbach, Wollersheim, Clarizio, Costen, & Stanley, 1961; Morrow & Wilson, 1961; Shaw & McCuen, 1960). The personality of the child may be a third causal factor (Clark, 1983).

It stands to reason that if the young gifted child is identified early and if professionals knowledgeable about gifted children work closely with the parents to provide a stimulating, challenging, supportive environment, underachievement can be prevented. "The truly important task is to identify where underachievement begins in order that corrective steps can be taken before that time" (Newland, 1976, p. 19).

We know that underachievement often stems from poor parent-child relationships. Most parents are vitally interested in their children and want to do the right things. A properly organized parent education program can help parents of the gifted interact more appropriately with their children. Whitmore (1980) found that males made up 90 percent of all referrals for placement in the Underachieving Gifted Program in Cuperton, California. Pierce and Brown (1960) found that girls who have domineering parents respond by achieving; boys, on the other hand, respond negatively to authoritarianism and, to achieve, need more freedom. It would appear that parents should be made aware of research findings so that they can make a deliberate effort to behave in such a way as to encourage their daughter or son to achieve. Group counseling of the whole family has been proven more effective in remediating problems than any other approach in studies conducted with elementary age children (Shaw and McCuen, 1960; Bricklin and Bricklin, 1967; Gallagher, 1975). It is difficult, if not impossible, to involve three-, four-, or five-year-olds or even gifted children somewhat older in group counseling. Parent education would seem to be the first step, followed by counseling of the parents if problems are deep-seated.

The earlier and the better parents understand their gifted children and what the research says about these children and how to educate them, the better prepared parents will be to manage their gifted children's educational program and to provide their children with a nourishing and reinforcing environment. Parents must see that their children are challenged and have opportunities to work and play with others of like abilities. They must insist that their children be placed with teachers who enjoy working with gifted children and know how to differentiate programming for them.

Parents can sell a program for young gifted children even more convincingly than professionals and can promote badly needed legislation if they organize themselves and develop strategies they feel comfortable implementing.

Early identification is especially important when the gifted child is also handicapped, because of the likelihood that such a child will be overlooked. A child with a learning disability may be diagnosed as slow or mentally retarded even though a percentage of these children are potentially gifted. At the University of Illinois, for instance, a paraplegic child referred to a project for the gifted/talented/handicapped has been given the prognosis that he would never learn to speak or walk. A psychological examination using a nonverbal intelligence scale indicated that he had an intelligence quotient in the 140's. At age three, he learned to read on a communication board, and at age six he entered a first grade and made academic progress commensurate with his ability. In some programs, he might have been treated as a mentally handicapped child rather than as gifted. The key to the referral came from a person trained in gifted education.

Children from low socioeconomic homes are usually not identified as gifted, especially during

early childhood. The home may place little value on schooling, and the children may not be encouraged to develop abilities and attributes such as persistence to tasks, higher-level thinking processes, motivation to learn, creative and productive thinking, standards of quality, and a healthy self-concept that are so important to the full actualization of a child's potential (Karnes, Shwedel, & Kemp, 1985, p. 204). Children from low-income homes may not have the experiential foundation of their more affluent peers and may need more nurturance for their gifts to emerge. Thus, early identification of the potentially gifted among low-income groups is a must.

Minority children are underrepresented in programs for young children, especially if they are from low socioeconomic homes. It is important that a concerted effort be made to identify such children early and place them in an environment conducive to the emergence of talent. Scholarships may be solicited from businesses or individuals to meet the special educational needs of these children if they appear potentially gifted.

To the question "How early should identification and intervention begin?" the answer seems to be "As early as possible; infancy is not too soon." While the instruments available for identifying young children are not as reliable as those for older gifted children, Lewis and Michaelson (1985) observe that our instruments are "better at detecting retardation than giftedness" (p. 361), a combination of strategies can be more reliable than any one by itself. Parents are good resources for pertinent data on their children.

Scarr — Salapatek (1976) warns that the heritability of intelligence is less than 0.50; therefore, we had better not use genetic background as the sole criterion for identifying giftedness. Feldman (1982) concurs with this point of view. Lewis and Michaelson (1985) may be right; "In contrast to handicapping conditions, giftedness may not exist early in life, but emerge only as the product of an interaction between infants' genetic endowment and the environments in which they are raised" (p. 55). It would appear, then, that parents of all infants should have access to professionals who can guide them in providing an optimal environment for the child's development.

Administrative Alternatives

A young child may not be gifted in all areas. Josh is six-years-old chronologically, reads at the level of a 12-year-old, but functions in math more like a typical six- or seven-year-old. His fine motor development makes it difficult for him to write stories, but his creative ability in developing stories is comparable to that of an 11-year-old. The administrator, the teacher, and the parent decide that the best plan for Josh is to have him join in a reading group of bright fourth-graders whose reading level is comparable to his.

In creative writing, a group of five gifted children from first, second, and third grades are working with a mentor who himself is a writer and has volunteered to spend two hours twice a week working with this group of children in a corner of the first grade room. A father of one of the children is a computer expert and is teaching the children to record their stories on a computer. The mentor helps the children with the spelling words they need to record their story.

No best administrative plan for gifted children at any age has been found in the relevant research. The key word for any workable administrative plan is still *flexibility*. Currently, however, mainstreaming young gifted children at the kindergarten, first-, second-, and third-grade levels seems the preferred option. If a state allows programming for four-year-olds, mainstreaming is the general rule. Ideally, there should be more than one gifted child in a classroom, for if gifted children need to learn to interact with and be tolerant of people with a wide range of abilities, it is no less important that they have opportunities to interact with children of comparable ability to their own.

Some programs favor a "pull-out" component in which children go to another room for enrichment. The number of times per week and the length of each session vary, but the block of time must be sufficient for the children to accomplish meaningful work.

Since most public schools do not provide educational programs for gifted children down to age three, programs for these young gifted children are usually provided by private schools; family grouping is sometimes used. For example, three-, four-, and sometimes five-year-olds may be enrolled in a special class for gifted children. There are no hard data to indicate that special classes are in any way harmful to the young gifted child. Halbert Robinson, who directed the University of Washington school for highly gifted children, stated that he found no reason to believe there were any ill effects from enrolling gifted children in homogeneous classes (Epstein, 1979).

When gifted children deviate so markedly from the other gifted children of their chronological age, it may be that the only way their special needs can be met is by providing mentors or tutors. If a three-year-old demonstrates unusual talent in music — has perfect pitch, composes at the piano, sings a song after hearing it just one time — the teacher cannot be expected to meet the child's musical needs. A mentor with the interest and ability to work with this child would have to be sought.

Another plan that works well for young children is to offer after-school programs, Saturday programs, and summer programs. Typically fees are charged to cover the expenses of employing teachers and for instructional materials. The University of Illinois operates summer programs for children three through eight. Doctoral students, public school teachers, parents, and professors teach the classes. These programs are appreciated by parents, who often find it difficult to keep their gifted child engaged in interesting activities during the summer.

The crucial factor in a program for gifted children is the teacher. No administrative plan will work unless there is a teacher who understands gifted children and knows how to work with them. Not every teacher is a good teacher of gifted children, and not all are eager to work with gifted children. In regular classes, gifted children are likely to have teachers with little training in gifted education. Teachers may even feel hostile toward them, as Rothney and Sanborn (1968) found when they conducted research with teachers of older gifted children. Wiener (1978) discovered that the same attitude toward gifted children and gifted programs prevailed among psychologists and psychometrists.

Unless the principal makes sure the gifted child is placed with intellectually superior teachers who work well with the gifted, the child may one year have a highly competent teacher who sees that her needs are met and the next year a mediocre teacher who resents her, who wishes she were in another teacher's room, who may even punish the child for learning so rapidly, for asking so many questions, and for expecting the teacher to provide her with advanced tasks. Under such circumstances, young gifted children learn to dislike school and develop an attitude of helplessness. Too young to drop bodily out of school, they often do so psychologically. Sometimes they become the troublemakers out of sheer boredom.

Differentiation of Instruction

One of the first questions asked about a program for young gifted children is "How does it differ from programs for average children of the same age?" A program for young gifted is *not* —

- Giving the gifted more of the same. If the gifted child can work 10 addition problems in five minutes, while the average child takes 10 minutes or longer, it is not satisfactory to assign the gifted child 20 problems of the same difficulty.
- Teaching the gifted what they already know. The gifted should not be expected to study spelling words they already know or to work subtraction problems they have mastered when what genuinely interests them is the application of information to new problems.
- Pursuing a teacher-selected topic when another topic is more challenging and makes more sense to the gifted child.
- Assigning reading material with a worksheet that calls upon low-level thinking skills.
- Expecting the gifted to spend a disproportionate amount of their time helping less able children complete their assignments (although some time spent this way may be beneficial).
- Giving the gifted child a curriculum designed for the average (though older) child.
- Enriching the regular curriculum. While this may be beneficial, it is not the total answer to differentiating instruction.

Instruction for young gifted children must differ qualitatively from that offered average children of the same age. At the University of Illinois, programs for young gifted children differ from curricula for the average learner in the following ways (Karnes, Shwedel, & Williams, 1983):

- Offerings not usually a part of the standard curriculum for young children;
- Encouragement to pursue a chosen interest in depth;
- Learning based on needs rather than on predetermined order or sequence of instruction;
- Activities more complex and requiring more abstract or higher-level thinking;
- Greater flexibility in the use of materials, time, and resources;
- Higher expectations for independence and task persistence;
- More opportunities to acquire and demonstrate leadership abilities;
- Greater encouragement of creative and productive thinking;
- More emphasis on interpreting the behavior and feelings of self and others;
- More opportunities to broaden the base of knowledge and enhance language abilities. (pp. 129-130)

In determining whether a curriculum is appropriate for gifted children at any age, Passow (1982) suggests three questions: (1) Would all children want to be involved in such learning experiences? (2) Could all children participate in such learning experiences? (3) Should all children be expected to succeed in such learning experiences? If the answer to all three is "Yes," the activities do not constitute a differentiated curriculum for the gifted.

The curriculum for young gifted children is influenced by a number of factors (Karnes, Linnemeyer, & Denton-Ade, 1983): (a) characteristics, needs, and interests of the gifted child, (b) goals of the parent and the extent of parent involvement, (c) the philosophy and goals of the program, (d) attributes, attitudes, and values of the teacher, (e) breadth of instructional materials, (f) the arrangement of the classroom, (g) the pupil/teacher ratio, (h) support services, (i) availability of community resources and the attitude of the community toward programs for the gifted, (j) financial allocations, and (k) supervisory and administrative support. Research and experience have suggested the following skills as those which young gifted children should acquire (pp. 80-81).

Cognitive

1. To acquire and recall a large bank of information.
2. To acquire and use an extensive vocabulary.
3. To use words innovatively.
4. To transfer learnings.
5. To generalize.
6. To see cause-and-effect relationships.
7. To see relationships other than the obvious.
8. To make inferences.
9. To integrate and synthesize information.

10. To formulate hypotheses.
11. To make applications.
12. To make transformations.
13. To engage in high-level problem solving.
14. To organize information.
15. To comprehend complex ideas.
16. To perceive subtle differences.
17. To detect discrepancies in procedures, rules, expectations.
18. To use alternative ways of seeking information.
19. To analyze situations.
20. To evaluate processes/products.
21. To see implications.
22. To use a high level of reasoning.
23. To manifest a high level of thinking.
24. To display unusual curiosity.

Creative

1. To take risks.
2. To think divergently.
3. To think and act flexibly.
4. To think and act fluently.
5. To create original and/or inventive ideas, processes, products.
6. To demonstrate imagination.
7. To tolerate ambiguity.
8. To demonstrate high aesthetic values.
9. To manifest a high level of intuitive thinking.
10. To elaborate on concepts.

Affective

1. To have a realistic self-concept.
2. To demonstrate respect for others.
3. To be empathetic toward others.
4. To be tolerant of individual differences.
5. To engage in self-evaluation.
6. To tolerate criticism.
7. To share belongings and ideas.
8. To persist at task.
9. To be independent in thinking and behavior.
10. To tolerate delayed gratification.
11. To tolerate lack of closure or delayed closure.
12. To be willing to compete.
13. To display a sense of humor.
14. To be sensitive to injustices.
15. To display standards of excellence.
16. To engage in moral reasoning.
17. To clarify thoughts, feelings, and values.
18. To display confidence in one's ability.
19. To be intrinsically motivated.

Adapting a procedure utilized in special education, professionals and parents may develop an individual educational program (IEP) for the gifted child. At the University of Illinois, such a plan is referred to as the Talent Educational Plan (TEP), which is a joint effort of staff and parents. Information on the child's level of functioning in the six developmental talent areas delineated by the federal definition of giftedness (Marland, 1972) is provided. The specific needs of the child in a talent area are determined, and the long-term goals and short-term objectives are stated. How the parents will be involved and how child progress will be evaluated are also important components of a TEP.

Differentiating a curriculum for young gifted children is taxing and time-consuming. Teachers should be given ample time during the day to plan and to confer with parents. It is critical that there be ongoing assessment to ensure that each child is making the progress of which he or she is capable and that the goals and objectives delineated in the TEP are being met. From time to time, the staff and parents must revise the TEP, setting new goals and objectives when the previous ones have been met. For some children, there is a time when resources outside the school and home must be sought to meet individual needs.

There is always the danger that gifted children may have gaps in their learning, since they learn so quickly and cover so much that is advanced for their age. The teacher must monitor their progress carefully. Although spelling is a habit not highly correlated with intelligence, gifted children are sometimes poor spellers. Another area that may be taken for granted is the acquisition of work-study skills. Because the gifted learn some things easily, they may not have acquired good study habits or efficient skills for acquiring information.

When school and home are truly differentiating instruction, the young gifted child is generally happy, is enthusiastic about school and highly motivated to learn, has a wide knowledge base,

becomes increasingly independent in seeking answers to his own questions, is able to interact positively with others, and displays improved leadership ability. Not only do such children use higher-level thinking processes, but their thinking is critical and creative. Their attention span is unusually long for their age, and they persist at a task until it is completed.

19

Use of Conceptual Models for Developing an Instructional Program

Although there is no research indicating that one conceptual model is superior to others, there is widespread agreement that exemplary programs are built upon theoretical foundations. A theoretical model or paradigm is useful in guiding instruction and in interpreting the program to parents, visitors, and decision-makers. It helps staff become better observers of children and to plan more precisely, and it largely determines which facets of the program should be evaluated. "Programs that adapt a model are apt to be more consistent and better organized than programs that do not" (Karnes, 1980). No matter what conceptual model is used with young gifted children, teachers rely heavily on a developmental model to determine where each child stands in each critical area.

Compatible models can be combined and can be useful in helping the teacher meet the unique needs of gifted children. Of the four conceptual models reported in the literature as being used in programs for young children, the University of Illinois over the years has used the Open Classroom and Guilford's Structure of the Intellect (SOI) separately or in combination in guiding instruction for young gifted nonhandicapped children from middle- and upper-class homes, for the gifted/talented/handicapped, and for gifted children from low-income homes who meet Head Start guidelines for eligibility. The differences between the two approaches can best be understood by comparing them on the following components: (1) theoretical base, (2) curriculum, (3) instructional methods, (4) child assessment, (5) teacher role, (6) teacher-child interactions, (7) use of time, and (8) use of space (Karnes & Bertschi, 1978).

Theoretical Base

The Structure of Intellect approach assumes that children learn best when teachers provide sequenced activities based on individualized instruction objectives. The SOI model helps teachers stimulate a variety of intellectual abilities, including convergent, divergent, and evaluative thinking. It aids in programming for talent development, as well as in the remediation of handicaps.

The Open Classroom assumes that children, with the teacher's help, are capable of determining the direction, scope, means, and pace of their education. The teacher helps children acquire basic skills, the learning tools that will enable them to explore, observe, describe, and organize experience. It provides an environment that encourages and nurtures talent in children and also meets their special needs.

Curriculum

SOI teachers rely on prepared curriculum and materials to plan lessons. They also use a game format to present math, language, and prereading lessons. Artistic and musical activities are included in the daily plan. Children learn songs, play musical instruments, and participate in yoga, dance, and creative movement exercises. Teachers also plan lessons using talk sheets, puppets, and role plays that help children explore their feelings and learn appropriate social behavior.

In the Open Classroom, children initiate their own learning activities. Instead of planning structured lessons, teachers attempt to extend or channel the child's activities in ways that integrate the learning of specific skills. Thus, teachers base instruction on their knowledge of each child and use the child's interests as a springboard to facilitate skill development. If Billy is playing with his favorite animal, a gray rubber hippopotamus, his teacher may ask what the hippopotamus eats. Billy, some of the other children, and the teacher may decide to find out by looking up the answer in an animal book. The group may spend a half hour learning about the eating habits of hippopotamuses and other wild animals.

Instructional Methods and Materials

SOI lesson plans are matched to individual needs. Sometimes children with similar needs are grouped together for an activity, and sometimes teachers place materials and instructions for an activity in a separate envelope for each child. The children call these tasks "workjobs" and perform them independently, usually sitting together in small groups with a teacher nearby to provide help when needed.

During directed playtime, children in the SOI classroom have access to a variety of materials. This is a time for child-initiated projects, play, and individual tutoring. Teachers encourage social interaction between children interested in using the same materials and take advantage of every opportunity to teach children directly.

A variety of materials are available at all times in the Open Classroom. They are placed so that children can reach them easily. Teachers listen carefully in order to engage children in dialogue and activities that lead to an exploration of subjects in which they have expressed interest. Content areas such as math, reading readiness, and fine motor coordination are integrated into a child's activity whenever possible. Teachers and children discuss problems and make decisions together.

Child Assessment

Both the SOI and the Open Classroom approaches use the same sequenced set of skills in six developmental areas as a guideline for child assessment and as an aid in determining individual priorities. In the SOI classrooms, skills are observed in gamelike activities that provide an opportunity for the child to demonstrate specific skills. In the Open Classroom procedure, teachers observe and record each child's performance of specific skills during spontaneous classroom activity. For skills unlikely to be demonstrated spontaneously, the teacher gives each child a simple task in which the desired skill can be observed. Such tasks are generally incorporated into the child's normal activities.

Teacher Role

SOI teachers plan precisely the daily experiences for all children in the classroom. They meet together daily to discuss their plans, to record progress, and to set new objectives. Although teachers provide materials and direct children in using them, they take care to involve them actively in the learning situation and encourage them to act as freely as possible within the context of planned activities.

In the Open Classroom, teachers help children understand their environment and feelings. Teachers give encouragement, feedback, guidance, information, and clarification to children throughout the day. Teachers create a purposeful atmosphere by expecting and helping children to use time productively and to value work and learning. Teachers in the Open Classroom meet for at least one hour each day to discuss their observations and to devise new strategies for extending learning experiences.

Teacher-Child Interactions

Most interactions between teacher and children in the SOI classroom are initiated by the teacher. Teachers make a conscious effort to ask questions that require divergent, convergent, and evaluative thinking when working with groups of children as well as when working with individuals.

In the Open Classroom, interactions are spontaneous and informal and usually initiated by the child. Teachers are more likely to work with individuals than with a group.

Use of Time

A specific daily schedule is followed in the SOI classroom. During the first period of the day, children are allowed to choose their own activities. Fifteen-minute lessons for small groups of children

are alternated with periods of less structured activity and with activities, such as music, when the whole group is together. Snacks are served in a family atmosphere, and self-help, social, and expressive language skills are encouraged. Children spend about 20 minutes each day on the playground.

The daily schedule in the Open Classroom consists of flexible blocks of time. Many learning activities take place simultaneously. A child may work alone, with a friend, or in a group. Snacks are available on a small table throughout the day. When children are hungry, they may help themselves to the portions illustrated on a menu card. Group meeting is the only time of the day when all children and teachers meet together. During each day's meeting teachers record topics or activities in which individual children wish to participate. The children involved in planning usually share responsibility for leadership during the meeting. Each child cleans up his or her own work space, and everyone helps put the room in order at the end of the day. In the Open Classroom, as in the SOI classroom, children spend about 20 minutes each day on the playground.

Use of Space

The use of space varies in the SOI classroom. During directed play, children and teachers are scattered in various parts of the room. During structured lessons, there may be two or three small clusters, each including one teacher and three to five children. During music and snack, teachers and children are together in one part of the room.

The use of space in the Open Classroom changes to meet the interests and needs of the children. Children move freely about the room throughout the day. The classroom is divided into areas with consideration for the type of work likely to occur, the supplies needed, and the proximity to other areas. The art area, for example, has a large table with bins underneath containing ingredients and tools for making playdough. On the wall is an illustrated recipe for making playdough, and next to that table is a toaster oven where playdough creations can be baked. Other art supplies — paper, crayons, tape, glue, paint, scissors, boxes, and "junk" — are at the child's level in the same work area. A corner for reading is set off from noisy activity areas and contains a carpet, pillows, and a wide variety of children's books, attractively displayed.

Although the SOI model is well suited for use with gifted children (its 120 ways individuals think provide the teacher with a variety of ideas from which to develop lesson plans and activities), the staff at the University of Illinois consider the Open Classroom more compatible with what a differentiated instructional program should be. They agree with Gallagher (1975) that the Open Classroom is especially appropriate for the young gifted children: "The potential of this approach for gifted students seems manifest. It makes the design of independent student research a more practical possibility and can allow the gifted student to move more at his or her own pace" (p. 278). The children have to take more responsibility for their learning, have to be more independent and creative, and make choices based on their interest and abilities.

The two other models which have been used successfully with young gifted children are Bloom's Taxonomy and Renzulli's Enrichment Triad. Bloom's Taxonomy has been used with young gifted/talented/handicapped children in the public schools of Chapel Hill, and Renzulli's Type I, General Exploratory Activities, of the Enrichmont Triad Model has been used in the Panhandle Child Development Association, Inc., Coeur D'Alene, Idaho, with gifted/talented/handicapped children. The Open Classroom has much in common with the Enrichment Triad Model and Bloom's Taxonomy, and Guilford's Structure of the Intellect Model is similar to Renzulli's Type II Enrichment, Group Training Activities.

Serving Gifted Handicapped Children

During the 50s and early 60s as Director of Special Education in the Champaign Public Schools, the author noticed that among the handicapped there were those who demonstrated characteristics associated with giftedness or unusual talent, but even though she provided some leadership in developing programs for nonhandicapped gifted children, handicapped children were not included in any special programming for the gifted. At that time, although segregated classes represented the approved administrative plan for educating handicapped children, they were mainstreamed with normal-functioning children whenever possible. And yet, including handicapped children who were potentially or functioning gifted with nonhandicapped children who were diagnosed as gifted did not seem viable. Thus, granted that some handicapped children were allowed to progress more rapidly than their handicapped peers with lesser ability, the gifted/talented handicapped child probably did not receive optimal programming for the development of his or her potential.

There are probably as many gifted children among the handicapped, proportionally speaking, as there are in the nonhandicapped population. It is more difficult to identify them, however, and in that respect we have not advanced very far since the 50s and the 60s.

One reason gifted handicapped children have been shortchanged is that teachers of the handicapped, preoccupied with helping children overcome or compensate for their handicapping conditions, dwell more on their shortcomings than on their strengths. Another is that special teachers, as well as their supervisors and administrators, are rarely trained in educating the gifted and are, thus, not attuned to identifying or programming them. If these children are mainstreamed with nonhandicapped children, they are likely not to be identified or to receive appropriate programming because regular teachers are not trained to work with handicapped children, nor are they trained to work with gifted children. Consultants of the gifted are likewise not trained to work with handicapped children.

An interesting case is that of a profoundly deaf child who learned to read at the age of three. Despite the fact that she had no residual hearing whatsoever, not only was she able to master the skills and content of the grade level expected for her chronological age, but she far surpassed that level of achievement. She lived some 30 miles from school, and her parents reported that she was able to complete all of her homework during the drive back and forth each day. She could read a page almost as fast as she could turn it. Everyone who worked with her recognized she had unusual ability, but nothing special was done to program for her gifts. There was no deliberate effort in the school to encourage her development and use of higher-level thinking skills, although she, no doubt, did use them on her own, nor to determine whether she had any talents other than intellectual and academic. Little attention was given to promoting creative and productive thinking. Most of the responses she was required to give were of a convergent nature. Since the teachers were concerned about her becoming proficient in oral communication, manual communication was frowned upon. She excelled because of her own motivation to learn, her intellectual ability, and her ability to concentrate and stay on task. Fortunately, she had bright, supportive parents who provided her with an environment conducive to developing her potential. In all likelihood, the home did more for encouraging the development of her gifts than did the school.

A number of blind children in the project were significantly above average and had the potential of being gifted, but, here again, they were viewed as markedly handicapped and teaching focused on Braille or mobility training and on academic skills. Creativity was not considered a primary goal. There were also learning-disabled and emotionally disturbed children; the chief concern, however, is not with the gifted who surfaced without an organized effort on our part, but with how many potentially gifted were not identified by any of us who were working with them.

It is recognized that it is neither fair nor valid to compare handicapped children with nonhandicapped children when identifying the gifted among the handicapped. Because handicapping conditions often obscure gifts and talents, identification of the gifted/talented among the handicapped requires nurturance in the various areas of talents over an extended time. The identification process involves comparing the handicapped with other children who are similarly handicapped to determine those who are potentially or functionally gifted. Identification is not a one-time process but an ongoing process over weeks or even months.

Serving the Gifted from Low-Income and Minority Homes

As with gifted handicapped children, in identifying the potentially or functionally gifted in the low-income population the approach is to compare children with others from the same economic background rather than with their more affluent peers. Children from low-income homes also need nurturance over an extended time before their gifts and talents emerge. Like the gifted handicapped, these children who will be overlooked unless a concerted effort is made to identify them.

Although no programs reported in the literature have been designed specifically for young minority children, the project at the University of Illinois for the gifted in Head Start does serve minority children who have been diagnosed as gifted. These children have been successful in one of our open classrooms for gifted children. Also, it is important to have among the staff a representative of a particular culture to work with those children.

Although Baldwin and Wooster (1979) have not worked specifically with young minority children, they have developed a matrix for identifying minority children that might be adapted to use with younger children. Mercer and Lewis (1981) have developed a multicultural pluralistic assessment (SOMPA) to identify the gifted minority child. This instrument would have to be adapted to use with the preschool child.

Parent Involvement

Being a parent is an awesome responsibility; being a parent of a young gifted child is even more challenging and potentially overwhelming (Karnes, 1983). Parents of the gifted, especially the young gifted, are usually eager to become involved in the child's school and to share the problems and solutions with other parents of gifted. As they become involved in various aspects of the school, they usually become less anxious about their parental role.

Colangelo and Dettmann (1982) reviewed studies of families of gifted children and summarized the needs as delineated by the parents.

1. Need for knowledge of characteristics and definitions of giftedness.
2. Need for knowledge about ways to promote and respond to achievement, since parental emphasis on achievement is controversial and has been associated with both academic successes and failures.
3. Need for knowledge of discipline techniques that work with bright and creative children.
4. Need for knowledge of techniques that alleviate sibling rivalry.
5. Need for reassurance to counteract fears about gifted children's social maladjustment.
6. Need for reassurance to counteract feelings of being inadequately prepared to deal with a gifted child.
7. Need for clarification of their own roles and those of the school in taking responsibility for helping a gifted child develop. (p. 59)

If the program is large enough to warrant it, a parent coordinator can be most helpful. This person can develop a parent education program based on the assessed needs of the parents, can assist the parents in getting mentors for their children, and can train parents to teach in the classroom, to assist in recruitment, to interpret the program at meetings and to work with other parents. Organizing large group and small group meetings and arranging for speakers takes time, but are important functions of a parent coordinator.

It is important that parents be aware of the findings of research, for if they realize that certain behaviors on their part influence their child in a certain way, they will work to continue the behavior if its results are positive or to curtail it if the results are negative. In this regard among others, parent libraries have proven very useful for parents of the young gifted child. But, a successful library requires that a professional work closely with the parents in building and maintaining it.

Parents should be given a variety of options, but the school should insist upon some level of involvement for the good of the child. Children whose parents are involved at school become higher achievers (Bayley & Schaeffer, 1964; Dave, 1964; Wolf, 1964). The home influences the child's attitudes, habits, values, and behavior; therefore, it is imperative that the school and home work closely together to set mutually acceptable goals and objectives for the young gifted child.

Retrieval and Acceleration of Promising Young Handicapped Talented Children (RAPYHT)

This section presents three programs developed at the University of Illinois to serve young children who are gifted and talented — the handicapped, children from low-income homes, and non-handicapped children from middle- and upper-class homes.

In July of 1975, the Bureau of Education for the Handicapped (BEH), now known as the Office of Special Programs (OSEP), funded the University of Illinois to develop and demonstrate a model to identify and more appropriately serve mildly to moderately handicapped children ages three to five who are potentially or functionally gifted and talented. After three years of development, this program, called Retrieval and Acceleration of Promising Young Handicapped and Talented children (RAPYHT), has been funded for outreach except during 1984-1985. Its charge has been to help other sites replicate the RAPYHT model (Karnes, 1978; Karnes, 1984; Karnes & Bertschi, 1978; Karnes, Shwedel, & Linnemeyer, 1982).

In all probability, gifted/talented handicapped children are the most underserved of the handicapped population. The fact that we all can name gifted individuals who were handicapped, but still made outstanding contributions to society, from the illustrious like Beethoven or Helen Keller to the lesser known, but no less valued, has sometimes led us to conclude that "giftedness will out." As a result, we have not deliberately tried to identify the gifted and talented among the handicapped. We, therefore, have no way of knowing how many such individuals have never been recognized, and, thus, have not received the encouragement and nurturance that would have actualized their potential. Every such oversight, however, is a loss both to the individual and to society.

The earlier gifts and talents are nurtured, the greater the child's chances of developing to the fullest. Attitudes, values, and habits are formed at an early age. To make sure that positive attitudes toward school and learning, a good self-concept and good self-esteem, motivation to learn, task persistence, and good interpersonal skills are acquired, a deliberate effort must be made by the significant persons in the child's life to see that the school and home cooperate closely.

The RAPYHT project has five special features that make it especially important to special educators and parents of handicapped children. First, it is a very positive program. It attends to the strengths of the children rather than focusing on the handicapping condition. Secondly, it provides special educators with reliable procedures for identifying children who are potentially or functionally gifted and talented. Thirdly, it provides curriculum to implement in the classroom and in the home in the child's area or areas of strength as delineated by the federal definition of giftedness (Marland, 1972) — intellectual, academic, creative, visual and performing arts, social and emotional (leadership), and psychomotor. The curriculum is individualized to meet the specific needs of children identified as potentially or functionally gifted/talented. The fourth feature is that gifts and talents are encouraged in *all* children, because it is recognized that it is important to provide the child with considerable nurturance before gifts or talents will emerge, especially among handicapped children. A general nurturing curriculum (Karnes & Associates, 1978a) is provided for the teacher to use in the school setting, and another curriculum package has been developed for parents to use in the home. Early in the development of this project, teachers were given inservice training in the characteristics of gifted children and in how to use the project's instruments to identify the potentially gifted in their classrooms. Through experience, it soon became evident that an extended period was needed to nurture the strengths of children prior to identifying the 10-20 percent judged to be potentially gifted. The fifth feature is that not only are parents recognized as educators of their children, but they must learn to be effective advocates for their handicapped children who also possess gifts or talents.

The RAPYHT program can be incorporated into any good basic program for young handicapped children. It was first demonstrated in an open, informal classroom and a highly structured teacher-directed classroom. Children in each classroom made comparable gains in creativity and talent development. Incorporating RAPYHT procedures into a classroom requires little additional expense. It does require a change in attitude; teachers must attend to the strengths of the children as well as their weaknesses. In so doing, the RAPYHT approach tends to upgrade the program for all handi-

capped children. Teachers begin to feel more positive about the children, and parents find it easier to adjust to the child's handicaps when they become aware that he also has some strengths. This is especially gratifying when some parents learn their children have strengths that far surpass those of other handicapped peers.

The following checklist illustrates the procedures developed for teachers to identify the potentially gifted/talented children in their classrooms.

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

Figure 1

II. CREATIVE TALENT CHECKLIST

Teacher _____

School _____

City, State _____

Date _____

	Children's Names															
1. Is very curious, often examining things closely or asking many questions.																
2. Has a good sense of humor and sees humor in situations that may not appear funny to others.																
3. Is often busily involved in work of great interest to him/her.																
4. Likes to make and is interested in a lot of different things.																
5. Often does things in his/her own way, is independent or nonconforming.																
6. Is highly imaginative in art work, play, use of materials, or ideas.																
7. Often has many ideas for a given situation.																
8. Is able to approach a problem or use materials in more than one way (flexibility).																
9. Often has original ideas or makes original products; often has unusual, "way-out," or unique responses.																
10. Elaborates in great detail in art work, play, or conversation.																
Creative Talent TOTALS																

Checklists on all areas of gifts and talents delineated by the federal government (Marland, 1972) have been developed and their reliability has been determined for this project (Karnes, Brown, Shwedel, (Svoboda, 1980). The following checklists, in addition to the one on creativity, constitute the battery of checklists used in the identification process: (1) Intellectual, (2) Academic (Reading, Mathematics, and Sciences), (3) Visual and Performing Arts (Music and Art), (4) Social and Emotional (Leadership), (5) Psychomotor. In addition, a checklist for parents to complete has been found invaluable in obtaining input from parents which enable staff better to determine which of the children are functionally or potentially gifted/talented. To identify children who are potentially gifted and talented among the handicapped population, we compare the handicapped with other children who have comparable handicaps rather than with nonhandicapped children.

Examples of general programming activities (Karnes & Associates, 1983) and activities to foster the development of gifts and talents (Karnes & Associates, 1978a) are not included here, but samples of similar activities are included in the discussion of BOHST, which is an adaptation of RAPYHT for the Head Start population.

While a great proportion of what we do in education is not reinforced by hard data, the developers of RAPYHT do have data which reveal the worth of this model on both a short-term and a long-term basis. The short-term impact was determined by collecting and analyzing data at the University of Illinois demonstration site and at two replication sites (one in New York, the other in Florida) to answer questions regarding child progress and the transportability of the model (Karnes, Shwedel, & Lewis, 1983b). The effectiveness of the RAPYHT model was assessed using both standardized tests (Animal Crackers -- Adkins & Ballif, 1973; Thinking Creatively in Action and Movement — Torrance, 1981) and a project-developed rating scale, The Talent Assessment Checklist (Karnes, Brown, Shwedel, & Svoboda). The handicapped children identified as potentially gifted/talented made significant gains on measures of self-esteem, task persistence, creativity, and talent area functioning between pre- and post-periods of intervention. The impact of RAPYHT intervention was of the magnitude to conclude that the handicapped provided with RAPYHT intervention did make educationally significant gains. It was also found that procedures and supportive materials developed in the project did enable replication sites to adopt or adapt the model and obtain comparable results with the children.

Karnes, Shwedel, and Lewis (1983a) conducted a study to determine the long-term effects of early programming for the gifted/talented handicapped who received RAPYHT training during the preschool years. A follow-up of the children (30) into the elementary school included data from school records and a questionnaire completed by teachers to determine how former RAPYHT children were functioning relative to their same-grade peers within the regular classrooms. It was found that 27 of these children were mainstreamed and three were in special classes — an orthopedically handicapped child, a behaviorally disordered child, and a learning disabled child.

Analysis of the achievement data revealed that RAPYHT children scored at or above the fifth stanine (i.e., the median) on reading and math tests at each grade level (one through four). At the kindergarten level comparable results were obtained on reading. Thus, the handicapped children who were identified as potentially gifted/talented performed at or above grade level on nationally normed tests of academic achievement.

Data were obtained on a teacher questionnaire requiring rating the former RAPYHT children on performance in areas directly related to RAPYHT goals as compared with their nonhandicapped peers. In terms of willingness to try new activities, RAPYHT children were rated as equal to or superior to the average child in the regular classroom. On listening skills, self-assurance, memory skills, writing skills, independence, attention span, and self-concept the former RAPYHT children were rated above their classmates who were not handicapped.

The conclusion drawn from this study is that RAPYHT programming in the preschool years pays off in academic achievement, attitudes, habits, and skills in subsequent years. Preservice and inservice training programs should provide teachers — regular and special — with information regarding procedures for identifying and programming for the potentially gifted among the handicapped so that this segment of our handicapped population can be better served.

Bringing Out Head Start Talents (BOHST)

A concern over a period of twenty years has been that young gifted/talented children from low-income homes are likely to be overlooked, and, thus, underserved. There are possibly as many gifted/talented children among children from low-income homes as among high socioeconomic homes but that these children, like gifted/talented handicapped children, must be compared with peers with comparable problems — in this case, from low-income homes. Also, it has been noted that, although Head Start seems to meet the needs of the average Head Start child and in recent years has been adequately serving handicapped children, the gifted/talented are not being identified. In 1983, the Administration of Child, Youth, and Families (ACYF) presented a funding possibility for adapting the RAPYHT model to the Head Start population, and in the summer of 1984, such a project was funded.

Since it was recognized that Head Start personnel do not usually have the formal training that public school teachers are required to have, the question was raised as to whether RAPYHT support materials could be implemented by Head Start personnel and their parents. In a few instances, attempts were made to replicate RAPYHT in Head Start programs and it was found that the differences in training did indeed make it more difficult for personnel to use RAPYHT materials. It was clear that the materials needed to be modified if they were to be useful in Head Start. The idea of adapting procedures and materials for the Head Start population rather than "reinventing the wheel" is in keeping with the policy of the funding agency.

The work undertaken included the following objectives:

1. To modify existing instruments, procedures, and materials.
2. To train Head Start personnel, volunteers, and parents to implement the model.
3. To develop procedures which ensured that the target population made a smooth transition into the public schools and received appropriate programming.
4. To determine the impact of implementing this project involving identification and programming for bright/gifted/talented children, teachers, and parents.
5. To develop viable ways to demonstrate this project to Head Start personnel and other interested professionals.
6. To develop viable ways to disseminate this project nationwide to all Head Start grantees.

At this time, the above objectives have been accomplished. The impact of the adapted model has been evaluated using an experimental/control design including 446 Head Start children. Each group was given a battery of tests to evaluate progress in the areas of task persistence, creative, and productive thinking, intellectual functioning and achievement, and self-concept. The results were most encouraging. All Head Start children were provided with programming to encourage the development of higher-level thinking processes, and identified potentially gifted/talented children were provided specific programming in their talent areas. All Head Start children did significantly better on the instruments used to assess the influence of the BOHST model. Those children identified as gifted/talented in the intervention group likewise were superior to their counterparts in the control group.

The components of BOHST are the same as for RAPYHT. There is no need to describe them again, but examples of the modified checklists and the plans and activities for use at home will be given. A full report of the statistical data obtained in this project will not be given, but a general summary of the findings will be included.

The attitude questionnaires given to teachers and aides provided data to show that the attitudes of teachers implementing the BOHST model toward children did become more positive than those of personnel in the control group who followed the regular curriculum.

The hard data on the impact of the BOHST model on teachers, potentially gifted/talented, and regular Head Start children not identified as gifted/talented endorse the use of BOHST materials for the Head Start population. It is our hope that this model will be disseminated to all Head Start grantees nationwide.

The plans for disseminating the model and making the support materials, including a training manual, available at cost include:

- Providing Resource Access Projects (RAPS) with two sets of materials they can share with Head Start personnel. There are 15 RAPs, located in Head Start regions across the country, as well as in territories, charged with providing technical assistance to Head Start regions across the country, as well as in territories, charged with providing technical assistance to Head Start grantees to facilitate mainstreaming of handicapped children and accessary services to Head Start.
- A nonprofit agency in Champaign has agreed to duplicate and sell the materials at cost.
- BOHST has been and will continue to be presented at national, state, and regional Head Start conferences when monies are available.
- During the spring of 1986, BOHST will be presented at the Council for Exceptional Children Convention in New Orleans and the American Education Research Convention in San Francisco.
- Articles are being written and will be submitted to journals during the spring and summer.
- An audio-visual presentation of the BOHST program is available free of charge to any organization that wishes to borrow this presentation.

General Programming at School and Home

As in RAPYHT, materials have been adapted for use in the classroom and at home. A BOHST innovation is the introduction of three animal mascots to represent three kinds of thinking, and making use of J. P. Guilford's Structure of the Intellect model as a guide for developing curriculum. These mascots were used for motivational purposes and to provide teachers and children with a cue to indicate the kind of thinking they were supposed to practice. Large pictures of the mascots accompany stories that give each mascot a colorful identity. Children learn a special hand motion each mascot uses before practicing a certain kind of thinking.

Delores the Detective helps children learn convergent productive thinking, Ivan the Inventor helps them learn divergent productive thinking, and Julius the Judge helps them learn evaluative thinking. The lessons in Figure 2, taken from the General Programming Manual, represent the three general types of thinking.

Figure 2. Sample Lessons

JUDGE LESSON
Packing a Suitcase

Goal:

To choose clothing items to pack for a vacation trip.

Materials:

- Clothing poster showing the following clothes: shorts, small T-shirts, boots, sandals, large pair of jeans, cap, mitten, swimsuit, coat, pants, tank top, and another pair of shorts (included with this manual).
- Non-permanent marker
- Wipe cloth

Steps:

1. Gather materials	Have a surface for displaying the poster available. Have the marker and wipe cloth within easy reach.
2. Prepare the children to be judges.	Tell the children, I want you to be judges. I'm going to give you a problem; you'll have to choose a solution. Remember Julius the Judge? Let's put our pencils to our brows the way Julius does.

3. Introduct the situation.	Let's pretend that Marie is going on vacation with her grandma. In order to pack her suitcase, Marie has to look through her drawers and pick out clothing for her trip. Let's help Marie choose them. Go over the poster with the children to be sure that everyone knows what each clothing item is.
4. Introduce the first consideration: right size for Marie	Let's think about the first consideration. Some things that Marie finds are not the right size for her. Point to the figure of Marie on the poster. Ask the children to raise their hands if they see something that's too big or too small for Marie. Call on individual children to identify one item at a time, briefly discussing that item, and then letting a child cross out the item if the group agrees it is inappropriate.

Packing a Suitcase

5. Present the remaining considerations one at a time: vacation area where it's hot	Bring attention to the clothing items that remain, then tell the children, Marie's grandma is taking her to Florida; *it's been very hot there* and they'll be staying right on the beach. This will be our second consideration; do you see any clothes that Marie would *not* want to wear when it's hot? Again, call on one child at a time, discussing each clothing item before it is eliminated.
teddy bears	The last thing we have to consider is that *Marie loves teddy bears.* She wants to take clothing with her that has pictures of teddy bears sewn on. Are there any clothes we should cross out because they don't have teddy bears on them?
6. Ask each child to reach a decision; acknowledge all judges' efforts.	Review the remaining clothing items with the children, then say: I want each of you to choose two things for Marie to take with her. Discuss each child's choices, reminding the group that there are more than just two good choices. Praise the children for thinking hard and for being good judges.

Lessons for Another Day:

Have a selection of toys in a large box. Set them out where everyone can see them. Tell the children that Marie wants to take one of these toys on her vacation. Which one should she pack? The children will have to consider that (1) it must not be too large for her small suitcase and (2) it won't be damaged if it gets wet, since Marie may be using it on the beach. Suggested toys for this activity: toy boat; large plastic pail and shovel; children's watering can; sandbox tools; a large truck; a large cloth doll; a small plastic doll.

Figure 2

Model Inventor Lesson
Inventing Different Uses

Goal:

To list a variety of uses for objects

Materials:

- a familiar object (select one of the following: rope, material scrap, newspaper, shoebox, cellophane, pipe cleaner, egg carton)
- chalkboard or chart paper, chalk or marker
- paper, crayons or felt pens

Steps:

1. Gather materials.	Have all items organized and ready to use. Select a familiar object to introduce. Have a chalkboard or chart paper nearby.
2. Prepare children to be inventors.	I'm going to ask you to be inventors for this activity. What do I mean by that word? Pause for responses. Adapt children's responses when necessary . . . Have everyone put on his pretend lab coat and take out his spectacles.
3. Introduce the idea of inventing new uses for the object.	I'm going to show you an object you've seen before. For this activity, I want you to invent or think up different ways to use this object — ways we might not have thought of before. This is the object. Hold up the object for all to see.
4. Write down ALL the ideas given.	OK inventors, what are some ways to use this _____? Tell me your ideas one at a time so we can hear everyone's idea. I'll write down the ideas you tell me so we can keep track of them. As each child offers an idea write it down on the chalkboard or chart paper so all can see. Accept all ideas, especially unusual or "far out" ideas, and treat each response equally.
5. Read back the list and ask for more ideas.	After children have exhausted their ideas read back the list. Give attention to the wide variety of ideas given. These are all good ideas you've thought up. Push for additional ideas. Phrase the question in a different way to help generate new ideas. What are still some other ways to use this _____? Think about some things you could do with this _____ at home, at school, playing outdoors. Allow time for additional responses. Encourage responses from a majority of the class. Add these new ideas to the list. When you've pressed for as many new ideas as possible, again read back the list.

6. Acknowledge all inventors' efforts.	Acknowledge the hard work that went into the ideas given. All of these different ideas show what good inventors you are. Good work!
7. Ask for more information or detail.	Now, we're going to play a second game using these ideas. I'll read you back the list again. Choose your favorite idea. Point to the list of responses. Don't tell us what it is. Think about how you would use the _____ in that way. One at a time you can come up and pantomine or act out the idea without using words. We'll try and guess what the idea is. Allow time for as many to get involved as possible.

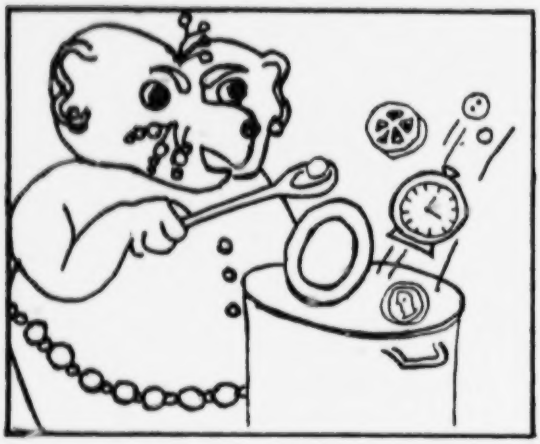
Lessons for Another Day:

Introduce the activity a second time using an unfamiliar object (see suggestions under materials). I'm going to show you an object you haven't seen or used before. Hold up an unfamiliar object such as a seam ripper, nutcracker, or corkscrew. Continue using above steps.

Parents are provided with suggested activities which they can implement in natural situations when they are with their children and do not require large blocks of the parents' time.

Figure 3
Parent Activities

CREATIVE COOKING
— inventing ingredients —



What are all the ingredients?

Inventor Activity

A good time to play this game with your child is when you're cooking in the kitchen.

Say to your child "I need some help coming up with a list of ingredients for a special stew I'm making. It's called 'Circle Stew.' It's for a Circle Monster who can only eat things that are circle shaped. What are all the things you can think of that could go into this circle stew?"

Hint: Some other day, try making a square stew . . . or a blue stew . . . or a red stew.

WHAT TO WEAR
— decisions about

What are the considerations?

Judge Activity

When your child is dressing for the day let him/her make some decisions about what to wear.

Ask your child:

"What are the considerations?"
- — Is it hot or cold?
- — Where are you going?
- — Does it fit?
- — Is it clean?
- — Does it look nice? etc.

Hint: Sometimes it's hard for us to allow children to make decisions. Try to let your child wear the chosen outfit, even if the colors clash or it looks a little strange.

Figure 3

Detective Activity

WHERE IS IT?

Play a hide-and-seek game with your child.

CLOSE YOUR EYES WHILE I HIDE THE TEDDY BEAR.
I'LL GO THERE AND LOOK.
IT'S IN THE LIVING ROOM.
IT'S UNDER SOMETHING...
IT'S UNDER SOMETHING GREEN...
IT'S UNDER THE COUCH. I FOUND IT!
GOOD THINKING!

1. **Hide a small stuffed animal or other object in any room of your home.**
2. **Give the first clue by saying what room the animal is in.**
3. **Give more clues, one at a time, until your child finds the animal. Praise him or her for thinking hard.**

These are some other possible hiding places and clues:

- **It's in the kitchen; it's *inside* something; it's inside something that keeps things cold. (Refrigerator)**
- **It's in the bedroom; it's *under* something; it's under something soft and cuddly. (Pillow)**
- **It's in the living room; it's *next to* something; it's next to something that's green and growing. (A plant)**

Hint: Be sure to give the clues one at a time! After each clue, give your child a chance to guess the answer before continuing to give more clues.

There is a manual which helps the coordinator training the Head Start staff to understand the checklists. The reliability of the checklists has been established to ensure BOHST staff that reduction of the RAPYHT checklists did not diminish the reliability of the identification procedures.

CODE
1. Rarely
2. Sometimes
3. Often
4. Almost Always

Figure 4

Screening for Talented Children
Teacher Checklist

Teacher _____

School _____

Date _____

Names of Children

INTELLECTUAL	
1. Communicates and expresses ideas very well.	
3. Is very good at solving problems and at applying what he or she has learned to everyday situations.	
2. Is able to understand abstract or implied relationships (e.g., usually gets more out of a story, film, conversation, etc., than others his or her age).	
4. Learns easily and quickly with good memory skills; tends to know about things of which other children are unaware.	
subtotal	
CREATIVE	
1. Often has many ideas or solutions to problems for a given situation.	
2. Elaborates or adds detail to art work or conversation.	
3. Is highly imaginative in art work, play, use of materials, or ideas; and often gives unusual responses.	
4. Is flexible (i.e., able to approach a problem or use materials in more than one way).	
subtotal	

Figure 4

Screening for Talented Children
Teacher Checklist

CODE
1. Rarely
2. Sometimes
3. Often
4. Almost Always

Names of Children

LEADERSHIP

1. Adjusts quickly to new situations and interacts easily with other children and adults.	
2. Tends to direct activities in which she or he is involved and assumes responsibility beyond what is expected for his or her age.	
3. Is often chosen or sought out by other children as a playmate.	
4. Shows a unique awareness of the needs of others (e.g., other children often come to him or her for help.)	
subtotal	

ART

1. Works seriously on art projects and gets much satisfaction from them.	
2. Experiments with different art materials and uses them in original ways, or produces art work which is very original.	
3. Has advanced skills in using art materials and does art work which is exceptional in composition (balance, unity, use of space), design, color.	
4. Shows a very strong interest in and remembers in great detail what she or he has seen.	
subtotal	

After the teachers have conducted general programming for the children to encourage talents to emerge, a staffing is held to determine which of the children are thought to be potentially gifted and talented. A wide net of 10-20 percent is used to determine the target children, because it is more difficult to identify gifts and talents at an early age than at a later age. Including a large number of children is preferable to missing some who may have above-average talent.

The team at the staffing addresses the following questions in determining if a child is potentially gifted/talented:

1. Did the child exhibit many of the characteristics commonly attributed to children who are gifted or talented in that area?
2. Was the child significantly superior to his classmates or peers in that talent area?
3. Did the ratings on the parent checklist and the teacher checklist generally seem accurate?
4. Did the additional information provided by other team members seem to verify the child's talent potential?

After considering these questions, the team makes the final determination as to which children would be identified as potentially talented or gifted. The manual gives guidelines as to how this can be accomplished.

When the potentially gifted/talented are identified, the teacher is provided with lesson plans and the parent with activities to encourage the development of identified talents. Figure 5 provides examples from the teacher's manual, which includes lesson plans in the six general areas of gifts/talents covered by the federal definition. Activities representing the six general areas of talent are included in pamphlets for parents. These are illustrated in Figure 6. Activities for parents to use at home are shown in Figure 7.

Figure 5. Sample Lesson Plans

ART TALENT ACTIVITY
Contour Drawing

Materials:

- Black felt tip pens or crayons (one for each child).
- Paper (several sheets for each child).
- Simple objects to use as "subjects" for drawing such as a leaf, a flower, fruit, or a cup.
- A variety of art materials such as paints, crayons, chalk, and colored markers.

Steps:	**Assessment Questions:**
1. Ask the children to sit at a table. Hold up the object that you want them to look at. (The object will show up better if you place it in front of a plain white sheet of paper.) Say to the children, "*Look carefully at this object. Now pretend you're an artist. Let's see how you would draw this using your finger as a pen. Make your drawing right in the air.*" Remind the children to follow the lines of the object as they "draw." Praise them for working carefully.	Can the child "draw" the object in the air?
2. Now pass out a sheet of paper and a black felt tip pen to each child. "*I want you to do the same thing, but this time you'll be doing it on paper like a real artist. You will use a special method called contour drawing. The way you do this is to keep your eyes on the (leaf) and the whole time you're drawing it. And, you are not allowed to look at your picture until it is all finished. Another rule is that you must keep your pen on the paper the entire time you are drawing. Remember, do not lift your pen off of the paper until you are finished!*" Repeat this process with several objects, starting with a simple object such as an apple and going on to a more difficult subject, such as a rose or a bunch of grapes.	Does the child look at the object the entire time and draw without lifting the pen?
3. After several objects have been drawn this way, ask the childen to choose one of their pictures to make into a picture of something else. Give the children paints, colored markers, or other art materials that you have available. Encourage the children to incorporate their original picture into a new design different from anyone else's. Have them work independently with a variety of materials.	Does the child draw a picture that is different from all the others?
4. Conclude this activity by setting out all the completed pictures in the same area. Ask the children to look at the pictures, comparing those that are of the same subject. Ask what is the same and what is different about those pictures. Also, ask each child to select a favorite picture and to give reasons for this choice.	Can the child compare the completed pictures and discuss a favorite one?

VISUAL AWARENESS
TECHNIQUE
ORIGINALITY
ART APPRECIATION

Figure 5

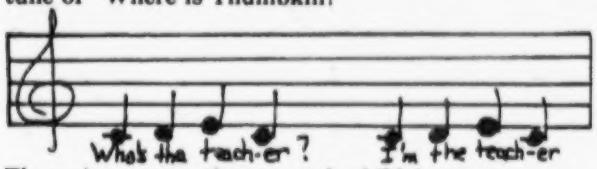
MUSIC TALENT ACTIVITY
What Did You Sing?

Materials:

- None

Steps:

1. Tell the children that you will sing a question to them and you want them to sing back the answer using the same notes you used. Demonstrate by singing an example to the tune of "Where is Thumbkin?"



Then sing a question to each child in turn. Try to make up a different musical phrase for each question. Some examples of questions and answers are:

Teacher: *Who is Mary?*
Who likes to sing?
Who's wearing red?

Child: *I am Mary.*
I like to sing.
I'm wearing red.

2. Tell the children that you want them to take turns being the teacher and singing a question to someone. Encourage them to make up a different tune or melody for their question.

3. Say, "*Do you know what an audience is?*" Give time for discussion. Be sure that the children understand that the most important things an audience does are first to *listen* to the performance and then when it is over to show their appreciation by *clapping.*

   Say, "*Today we are going to take turns performing solos. Solos are when one person performs at a time. While one person is performing a solo, the rest of us will be the audience.*"

   Hum a familiar song. Ask the children to identify it. Now ask each child to hum or sing a favorite song. Lead the children in clapping after each performer finishes a song.

4. Discuss the songs which were just performed.

   Tell the children, "*When a musician performs, he or she is 'talking' to people through the music. The music may 'say' many things. For example, it can sound happy or sad. A*

Assessment Questions:

Can the child remember a simple musical phrase and repeat it?

LISTENING

Can the child create a musical question?

ORIGINALITY PERFORMING

Can the child sing a solo before the group?

Can the child state what was good about a particular performance?

good musician will also look or act like the feeling the song is trying to express. For example, if the music is sad, the performer will look sad."

Ask the children if they think that any of the performances they just heard were particularly good. Why do they think so?

Figure 5

CREATIVE TALENT ACTIVITY
Alien Uses

Materials:

- A fork (you may substitute another commonly used object, such as a cup, mirror, pencil, key).
- A puppet (made to look like an alien creature with antennae).

Steps:

1. Put the puppet on one hand and assume its character.

   Teacher: *"We have a guest today. Let me introduce him to you. His name is Zork. He's an alien, a creature from another planet. I've asked Zork to class today so we could share some information about our worlds. He told me earlier that he thought we Earthlings used things in weird ways — in ways that don't make any sense."*

   Zork: *"That's right. You people have some strange habits. Let me show you an example of what I mean."* Hold up the fork for Zork. *"What do you use this for in your world?"* Ask a child to respond. *"See what I mean? That doesn't make any sense at all."*

   Teacher: *"Well, Zork, what do your people use a fork for?"*

   Zork: *"I won't tell you; you'll have to guess! Then if you guess right, I'll tell you."* Ask each child to think of different ways to use a fork?

2. When a child names an unusual use for the fork, say to him or her, *"Show Zork exactly what you mean. Take the fork and pretend you're using it that way."* Continue until each child has had the chance to name and demonstrate an unusual use for the fork.

Assessment Questions:

Can the child think of different ways to use a fork?

Can the child demonstrate using the fork in an unusual way?

3. Now, encourage the children to think of even more uses for the fork. Accept all answers, praising the children for their ideas. After awhile, have Zork select one idea, saying, *"That's it! You've got it. Now doesn't that make more sense than eating with it? How uncivilized!"*

Can the child think of many uses for the fork?

FLUENCY

4. **Zork:** *While we're on the subject of forks, there's actually a second, very secretive use for forks. Some people on my planet belong to a secret club. I happen to belong to it, so I know. In this club, we use forks in a completely different way. It is not any of the ideas you've suggested so far — although I must admit they've been good ones. Since the secret club prevents me from actually telling you what the use is, I'll have to communicate in another way. Let's see . . . I know, I'll make my antennae buzz when you've guessed correctly. Okay?"*

   Press the children to come up with some very unusual uses. When a child thinks of one that is particularly far-fetched, make a buzzing sound for Zork's antennae.

   Conclude the lesson by having Zork say, *"Thanks, friends. I didn't expect my visit to be so much fun. I had heard you Earthlings were rather odd, but you're not so bad. If you don't mind, I'll just invite myself back for a return visit. See you next time!*

Can the child think of an unusual and unique use of a fork?

ORIGINALITY

Figure 6. Activities from Parent Pamphlet

READING TALENT ACTIVITY

Word Bingo

Materials:

- Bingo cards — one for each child. Duplicate or use the bingo cards provided. Cover with clear contact for greater durability.
- Tokens for each child (beans, buttons, pennies, etc.).
- Container to hold the tokens (box, dish, bag).
- Chalkboard and chalk.

Steps:

1. Tell the children they are going to play a bingo game. The purpose of the game is to cover up all the pictures on their board. Give a bingo card to each child. Review each picture with the children. For example, say, *"Find the picture of a gate. Put your finger on the gate."* Put the container of tokens out where every child can reach them.

Assessment Questions:

Can the child match a word to the picture it represents?

DECODING

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Begin writing the first word on the board. As you write, say, *"I'm writing a word on the board. Here's the first letter. Does anyone have a word which begins with this letter? Look on your cards. Here is the second letter. Now here's the whole word."* Give the children enough time to look for the word. Say, *"If you have this word on your card, put a token on it."* Continue in the same way with the following words: fan, car, dog, man, jar, bed, kite, ring, net, sun, gate, tent. The first child to cover all of the words says, *"Bingo!"* Play again, changing the order of the words.

LISTENING PHONETICALLY

2. Play the game again, this time using words that rhyme. Say, *"Now we're going to play the bingo game again, only using words that rhyme. Remember what rhyming words are? They are words that sound alike. Look at your cards. Look for a word that sounds like red . . . head . . . said . . . fed . . . Good — you found bed."* Give these clues slowly as the children look at their cards. Be sure to pronounce each word carefully. When a child finds the rhyming word, have him or her put a token on it. Continue with the following rhyming word clues.

Can the child match words that rhyme?

"I'm thinking of the word that sounds like . . .
fun . . . run . . . one (sun)
set . . . let . . . pet (net)
far . . . bar . . . tar (car and jar)
ate . . . late . . . wait (gate)
sing . . . king . . . wing . . . (ring)
can . . . ran . . . pan . . . (man and fan)
tight . . . write . . . sight . . . (kite)
sent . . . rent . . . went . . . (tent)
hog . . . log . . . bog . . . (dog)."

The first child to finish covering the card says "bingo!" Change the order of the words each time the game is played.

UNDERSTANDING IDEAS

3. Play the bingo game one more time. This time the children will look for a word to finish a sentence. It must make sense in the sentence. Read the following sentences, waiting after each one until the children have had time to think and mark their cards. Say, *"I'm going to read a sentence to you. It will have a word missing. One of the words on your card will finish the sentence so it will make sense. Now listen carefully. If you have the missing word on your card, put a token on it."*

Can the child choose a word which will accurately complete a sentence?

a. *Don't forget to shut the* _____ (gate).
b. *The girl drew a picture of the sky with a brightly shining* _____ (sun).
c. *Catch the butterfly with the* _____ (net).
d. *On her finger was a beautiful* _____ (ring).
e. *Do you know how to fly a* _____ (kite).

f. If you're tired, you can go to _____ (bed).
g. The pickles are in the _____ (jar).
h. That policeman is a big _____ (man).
i. It's time to feed the _____ (dog).
j. To get to grandmother's house we drove in the _____ (car).
k. To cool off on a hot day we turn on the _____ (fan).
l. The family went camping in the _____ (tent)."

4. Give each child a chance to give word clues to the other children. Have one child stand before the group, holding up his or her card so everyone can see it. Tell the child to silently choose one of the words on the card, then give the other children clues without telling which word it is. For example, the clue for "sun" could be, "*It's yellow and in the sky.*" or "*It starts with an 'sss' sound.*" The child who guesses it first can be the next leader.

Can the child give word clues to the other children?

Figure 6

MATH TALENT ACTIVITY
Stone Wizard

Materials:

- A paper bag.
- 20 or more small stones.

Steps:

1. Before the children gather around, place a few stones in the bag, taking notice of the exact number. Then gather the children around and say, "*I am the Great Stone Wizard. I can make stones appear in my magic bag here. But before I show you the stones, you'll need to guess how many I have. I'll help you guess by giving you clues.*" Call on children to guess the number of stones in your bag. Respond to their guesses by saying *too high* or *too low*, until the correct number is guessed.

Assessment Questions:

Does the child demonstrate an understanding of "more" or "less" by responding correctly to the clues?

2. When the correct number is guessed, take out the stones and ask a child to count them and to verify the guess. Repeat this guessing game one or two more times until the children are comfortable with it.

Does the child count the stones correctly?

3. Ask one of the children to be the Stone Wizard. Have that child select the stones and count them while the rest of the group puts their heads down. Instruct the new Stone Wizard to continue the game by responding with "too high" or "too low" to the group's guesses. Give each child at least one chance to be the Stone Wizard who puts the stones in the bag, counts them, and gives clues to the group. (Assist a child only if necessary.)

Can the child correctly give clues to the rest of the group?

4. To conclude this activity, tell the children, "*I'm going to think of a number and I want you to guess it. I'll give you clues like the Stone Wizard did, but you'll have to listen very carefully because my clues will be a little different.*" This time, after you have thought of a number, give such clues as, "*I'm thinking of a number . . .*
   - *between 7 and 9.*
   - *between 23 and 25.*
   - *less than 30, but more than 28.*
   - *that is 2 more than 6.*
   - *that is 1 less than 4.*"

Can the child correctly answer more difficult clues?

Figure 6

PSYCHOMOTOR TALENT ACTIVITY
Bouncing Balloons

Materials

- An inflated balloon for each child (Have a few extra on hand in case some pop).
- Two records, one that has a moderate rhythm and one that has a quick, rapid rhythm.
- A record player.

Steps:

1. Hand a balloon to each child. "*Have you ever thrown a balloon in the air and caught it? Do you think it's just like throwing and catching a ball? Let's try it!*" Encourage the children to toss the balloons up several times and to catch them. Be sure that the children use only their own balloon while doing this.

Assessment Questions:

Can the child toss a balloon in the air and catch it?

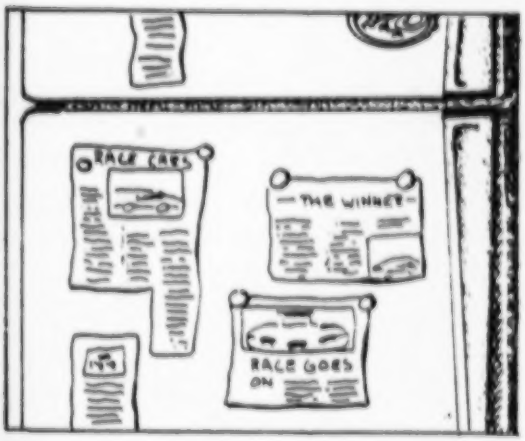
2. "*Now, I'm going to play some music. I want you to keep playing with your balloon by throwing it in the air, catching it, throwing it to someone else, kicking it, batting it, or doing anything else you want with it. But while you're doing this, I want you to listen to the music and move with the music.*" Play the moderate music and encourage the children to move along with it.

Can the child move to music while playing with the balloons?

3. Now explain, "*I'm going to ask you to do several different things with your balloons fairly quickly. Listen carefully!*" Give a series of different directions changing the directions frequently. For example, "*Use your hands to bounce the balloon in the air, use your foot to kick it in the air, bounce the balloon with your head as you walk toward me, now keep bouncing it while you walk away from me, now stop walking but keep bouncing your balloon.*"	Can the child move from one skill to the next on verbal command?
4. Now play the record that has a faster beat. Continue giving the children a series of directions but at a faster pace. Observe if the children easily keep up with the requested movements without tiring.	Can the child continue the activity through the entire song?

Figure 6

NEWS REPORT
— collecting news stories and pictures —



What else can you find out about car racing?

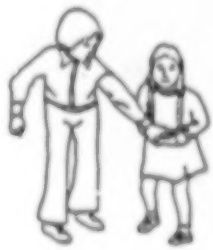
Intellectual Activity

Be alert to news events that might be interesting to your child. Examples are rocket launches, weather (snowstorms, rains, etc.), and sports. Let your child learn about these by watching televised news reports, listening to reports on the radio, and finding pictures and articles in newspapers or magazines.

Help your child make his or her own book on a subject by combining cut-out pictures, drawings inspired by news reports, and stories written (or dictated) by him or her.

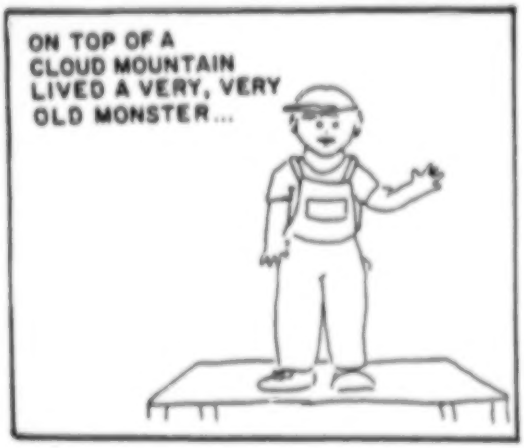
Hint: You can also use a bulletin board of tape news items to the refrigerator.

Figure 6



Leadership Activity

LET ME ENTERTAIN YOU
– stage a performance for a family member –



Now presenting, "The storyteller!"

When you and your child want to liven up a rainy day, ask your child to plan a performance for you. Your child's talents may include any of the following:

- singing
- dancing
- telling jokes
- doing magic tricks
- playing an instrument
- pantomiming
- telling a story
- gymnastics.

Tell your child to plan the performance and to let you know when he or she is ready. Then sit back and enjoy the show!

Hint: Help your child organize any props and plan the performance. You may want to help your child write a program for the event.

Psychomotor Activity

AND ONE AND TWO . . .
– keeping rhythm with different body parts –

Move your fingers and toes while we count out eight beats.

See if your child can coordinate body movements in a rhythmic way. While riding in the car, count out or sing eight even beats:

And one and two and three and four and five and six and seven and eight.

Ask your child, to move two body parts while you count together, like head and shoulders, knees and eyebrows, or elbows and toes, or both feet.

Now, see if your child can move one body part doubletime (both on the "and" and on the "number") and one body part singletime (just on the beat or "number").

Hint: Try letting the child start by tapping a foot doubletime and then adding in a slower handclap.

Figure 7. Activities for the Home

SUBSTITUTES
– determining items that could be used instead –

What else could I use to hold flowers?

Creative Activity

Encourage your child to create some new uses for familiar things. While you are cooking in the kitchen ask your child,

"What if we didn't have a measuring cup? What else could we use to measure with?"

or *"What if we didn't have spoons? What else could we eat with?"*

or *"What if we didn't have a rolling pin? What else could we use to roll out our cookie dough?"*

Ask your child to think of as many different ideas as she or he can.

Challenge your child to think of substitutes for things in other areas of the house as well. Like, *"If you only had one mitten, what else could you use to keep your hands warm?"* or *"What would be a good substitute for a shoestring?"*

SHOPPING FOR LETTERS
– looking for letters on items in the grocery store –

Can you find something that begins with each letter on your list?

Reading Activity

Next time you go to the grocery store, give your child an alphabet shopping list. This can be an imaginary list or a real one. (For the real list, simply write the letters of the alphabet on a piece of paper.)

As you walk down the aisles tell your child to find something that begins with each letter on the list. Once an item is found, that letter can be crossed off.

When you're waiting in the check out line, go through the alphabet shopping list together. How many items can your child remember? Hint: Don't worry about the letters your child can't find.

Figure 7

Leadership Activity

When you have time at home to do something special, give your child a chance to be a teacher. Ask your child to teach you a game that he or she knows or to make up a game to teach you.

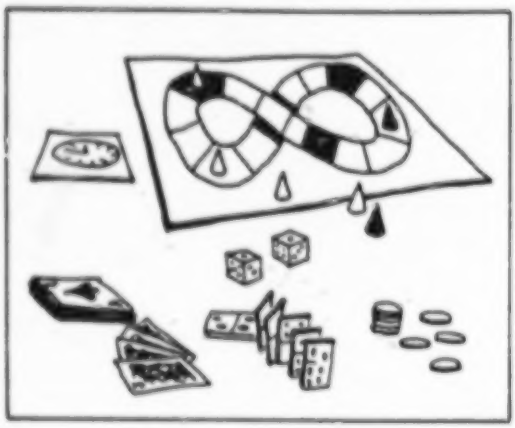
The game could be a card game, music game, outdoor game, fingerplay, or song, etc. Remember, the game should be one you don't already know.

As you're playing, tell your child which directions are clear to you. Ask for an explanation of any directions which you don't understand.

Hint: The game may be very simple and noncompetitive.

SHOW ME HOW

— teaching a game to someone else —



Here's how to play this game.

University Primary School

The University of Illinois provides an educational program for gifted and talented children ages three through eight. Initially, in 1980, a program for ages three through five was funded by the federal Office of the Gifted. After two years this office was abolished and the project was terminated. Since then the program has been expanded to include ages six, seven, and eight, and the financing of the program is largely covered by parent fees.

The predominant philosophy of the program is an open framework. A comparison of this approach with a teacher-directed approach is delineated in a previous section on use of conceptual models.

The goals for children are:

1. To develop a healthy, realistic self-concept and good self-esteem.
2. To acquire appropriate and effective interpersonal skills.
3. To have positive attitudes toward school and learning.
4. To persist at task.
5. To develop exploratory behavior and ability to take risks.
6. To engage in creative and productive thinking.
7. To develop higher-level thinking processes.

It was recognized that the parents are significant influences in the gifted/talented child's life; therefore, the project has goals for parents as well:

1. To help parents understand their gifted child.
2. To help parents acquire skills for advocating for their gifted child.
3. To help parents acquire the knowledge and skills that will enable them to promote the talents of their child.
4. To help parents learn appropriate and effective methods of child management.
5. To help parents utilize resources that will be beneficial to their gifted child.

Parents are the primary source of referral to the program. In the spring of each year, there is an open house for parents to visit the program, meet the staff, and ask questions. The open house occurs on a Saturday at the school, and parents with children in the program participate.

Before parents arrange for their child to be given a battery of eligibility tests, they are encouraged to visit the school. There they are given reprints of articles about the school, as well as other printed information, and are shown an audio-visual presentation which further clarifies the program. Emphasis is placed on the characteristics of gifted children so parents will be better judges of whether their child will likely meet criteria.

Time spent interpreting the program does pay off in reducing referrals of children who do not meet criteria. In the summer of 1985, for instance, 46 children were seen by the identification team, which included a qualified psychological examiner, and only two of the 46 proved ineligible. The mean IQ of the children examined was in the 140's. Although IQ is not the only consideration for eligibility, a measure of intellectual functioning is included in the battery.

Identification of children for the program entails a battery of tests and information obtained from the parents on a questionnaire (Karnes, Shwedel, & Kemp, 1985). The criteria for entry include:

1. Scoring 1 1/2 standard deviations or more above the mean on any one of the standardized tests — *Goodenough-Harris Draw-A-Person Test* (Harris, 1963), *Stanford-Binet telligence Test* (Terman & Merrill, 1973), or *Thinking Creatively in Action and Movement* (Torrance, 1981).
2. Scoring 1 1/4 standardized deviations or more above the mean on any two of these instruments; or, for children from low socioeconomic backgrounds:
3. Scoring at least 1 standard deviation above the mean on any two of these instruments.

If the children are of school age, information on achievement is obtained from the school, and where possible, from previous teachers. While not all children functioning two or three years above grade level are gifted, marked academic acceleration does indicate above-average intelligence.

Since the University of Illinois community offers an abundance of resources for individuals with special needs, UPS does not admit children who have marked emotional behavior, or physical problems such as deafness, blindness, cerebral palsy, even though they may be gifted, because the

school cannot provide such services as psychiatric, psychological, social work, speech and language therapy, occupational and physical therapy. It is recognized that there are gifted individuals among special needs children, but parent fees do not allow for employment of such experts. The suggestion is made that the parents go to the public schools where such services are available.

It should be understood that the UPS staff expects children to have problems within the normal range, but when problems deviate markedly from the norm the staff have to admit that they cannot accommodate such children.

To the author's knowledge there is no institution of higher learning training teachers to implement the open classroom philosophy. Teachers in the UPS program are prepared through inservice training. Fortunately, a number of professors at the University of Illinois are knowledgeable about the open framework and serve as consultants. Students in training in the area of gifted education receive their practicum experience in one of the classes.

Placing gifted children together in special classes has received considerable criticism; however, there are no hard data to verify accusations that gifted children are harmed in any way by being grouped together in special classes for instructional purposes. In fact, we view this administrative plan as highly desirable. We feel that gifted children need to be able to work and play with other gifted children. Since they often have interests which are different from the nongifted, they are at a loss to find peers among the nongifted with whom they can converse, pursue projects, and play games. Also, parents of gifted children like to have access to other parents of the gifted to discuss their concerns and their ways of handling certain situations. It is not easy to rear any child, but parents of gifted children are sometimes overwhelmed by the demands placed upon them. They are fearful that they are not meeting their gifted/talented child's needs. They wonder if they are handling problems in the best possible manner. As a rule, the more the child deviates from the norm, the more taxing it is on the parent to rear the child. Parents of the gifted need to have the support and consultation of knowledgeable professionals, a good reason for early identification and programming of the gifted child, as early as age three (and even earlier).

Teaching gifted children is also taxing. While the teacher may have all gifted children in her room, there is still a wide range among the children in important areas of development. We are convinced that each classroom of 20 to 25 children needs two teachers, and even then, paid or nonpaid mentors are needed to teach certain subjects of skills. From our experience, we recommend no more than two age levels in a classroom to ensure that the curriculum is really being differentiated for each child.

The preschool and kindergarten classrooms were designed specifically for young children. An abundance of toys and materials is kept on low shelves. Children are encouraged to take responsibility for their own learning. Teachers are eager to help children pursue their interest, expand their horizons, engage in critical thinking, creative thinking, and generally use higher-level thinking processes. Goals are set cooperatively by teacher and child, but the teacher still has to do a great deal of planning to assist the child in reaching them.

In the kindergarten, the open philosophy continues to dominate; however, there are times when the children need to learn certain skills before engaging in projects of their choosing. The teacher at this level may be observed working with small groups of children, directly teaching certain skills, more frequently than in the preschool classroom.

As the child turns six, seven, or eight, the academic demands become greater, but the children are encouraged to progress at a rate comfortable for them. They are not expected to learn what they already know, and there is no hesitancy in providing them with materials several years above grade level if that is where they are functioning. All classrooms offer the children a wide range of materials.

In addition to two teachers for each classroom, professors and their doctoral students are providing instruction in mathematics and the use of computers. Mentors are paid to provide instruction in a foreign language and affective education.

A strong emphasis at all levels is placed on creative writing. Children are expected to engage in creative writing each day. If the younger child has not learned to write, he dictates his story, poem, or report to the teacher or to a volunteer.

Parents are encouraged to work in the classroom, as are volunteers. Young children are very dependent on adults to help them find answers to their questions, to spell words, and to discuss plans. While independence is a goal the teachers promote, young children have to acquire certain skills to become independent. They need to be monitored to see that they persist at task. They need to be continuously assessed to see that there are no gaps in their learning.

The principles adhered to in the University Primary School for gifted and talented children,

whether it be the preschool, kindergarten, or elementary group, are: (a) learning involves acting on the environment, (b) learning is developmental, (c) learning accustoms the child to decision making, (d) learning integrates knowledge, and (e) learning is based on dialogue (Karnes, Shwedel, & Kemp, 1985).

Learning involves acting on the environment. Learning in a University Primary class is more than covering a certain number of pages in a book or completing worksheets. Large blocks of time are given to the children's pursuit of projects of their own choice, and whatever they pursue, they are expected to come up with some product. It may be a play, a story or report, a mural, an article for the newspaper, a debate, an experiment, a program to present to another class, a group of his classmates, or to parents. To get needed information, it may be necessary to take a field trip, interview an expert, view a film, or seek reading materials in the library. Teachers encourage the children to think of interesting ways to convey what they have learned to others. A skillful teacher can help children expand their knowledge, acquire skills, and at the same time become more adept at thinking critically and creatively.

The flexible use of time is characteristic of the open classroom. A child may stay with a project for several days or weeks, as long as interest is high and time is productively used. Children are expected to plan ahead, however, and to have a clear idea of how they expect to use their time.

Learning is developmental. At the beginning of the year, a child is assessed developmentally. It is important for the teacher to have such information to make sure that there are no gaps in the child's learning and to determine what the child is ready to learn next.

Assessment is ongoing, of course. In the late spring, a battery of standardized achievement tests helps staff determine the strengths and weaknesses of the program. Parents are also interested in how their children are progressing academically. In the fall and again in the spring, the teacher has a conference with the parents to review important facets of a child's development. These conferences customarily last for approximately one and one-half hours. There are other conferences during the year, but these two are especially important. Parents have input in formulating goals for their children, have a close working relationship with the staff, and are encouraged to visit the classroom.

Learning involves the child in decision making. Throughout the day, children have many opportunities to make decisions. They have sign-up sheets at the end of each day to indicate what they intend to do the following day. The next morning they review their plans and make needed changes. They are expected to make careful plans for the future and persist at task.

Projects provide the children with opportunities to make decisions. A child may pursue a project singly or in a small group. In a year, as many as 20 to 30 projects may be initiated by the children and developed by the children and teacher. Typically, one child comes up with an idea, presents it to a group to get volunteers, or asks other children to participate. The teacher meets with the group in the beginning to see that a viable plan is developed and monitors its progress carefully. The teacher's questions and comments stimulate the children to engage in higher-level thinking and to plan more appropriately.

Some children may exhaust their interest in one project and become interested in another. There is a procedure for dropping out of a project, which is understood by the children: they must report to the teacher that they will no longer be working on the project, and they must have a plan as to how they are going to spend their time. Children may engage in more than one project at a time, but the limit is usually two at the preschool level and three at other levels. Since gifted children are interested in many things, a teacher has to guard against a child's taking on too many projects and pursuing none.

Learning integrates knowledge. Group projects give children an opportunity to integrate knowledge — science, social studies, music, art, mathematics, reading, language, spelling, writing — in a natural way based on the children's needs.

Through comments, questions, and suggestions, the teacher helps children incorporate learning from various fields into their projects. The teacher knows where each child stands developmentally and can encourage integration at the child's level so that learning makes sense and he makes the progress of which he is capable.

Learning is based on dialogue. Dialogue between teacher and child and between children is very important to each child's progress. Children learn to understand others and to understand their own feelings when they converse freely with others. They discover how their behavior affects others and how the behavior of others affects them.

While large blocks of time are devoted to project work, a group meeting daily is felt to be very important. It is a time for talking about problems, a sharing time when a group may wish to interpret

what it is doing to the class, a time to plan a field trip if the whole group will be going or to discuss the need for a rule and to formulate one. It may be a time when the teacher or a child reads a story or a visitor comes to share something with the group. Group meetings may be called any time there is a need.

Children are expected to put away materials they have used on their project work and clean up any mess they have made. They may move about the room and talk to other children, but they are not allowed to waste time or disrupt the work of others. It is rare that a child poses a behavior problem, primarily because each child is challenged and is not bored. The teachers are warm, supportive, and enthusiastic. Children play a major role in deciding what projects they wish to pursue. Isolated drill and worksheets requiring low-level thinking and regimentation are not characteristic of the program. Teachers understand gifted children and know strategies which ensure children's progress. Parents are very interested in the program of their child and are supportive of the program.

Summary

Young gifted children who are handicapped, who come from low-income homes, and those from middle and upper socioeconomic-level homes need to be identified early — at least by age three — and appropriately served. Parents and professionals must be advocates for the young gifted/talented child and must promote legislation that will allow public schools to serve them at an early age. Institutions of higher learning must be encouraged to train teachers, administrators, and supervisors to be effective in working with the young gifted/talented child.

Waiting until the gifted/talented child is in the middle and upper elementary grades may be too late for some children, especially if the child is from a low-income home, belongs to a minority group, or is handicapped. The problems gifted/talented children are prone to have can be greatly minimized if parents and professionals begin early in the gifted/talented child's life to work together. While there are few models to follow in working with the young who are gifted/talented, some do exist. It appears highly desirable to encourage the federal government to pass legislation similar to the child's Early Assistance Act (1968) for the handicapped and to implement an act following the blueprint of the Office of Special Programs which would involve developing models to ensure widespread effort to better serve young gifted/talented children.

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